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CLAIMS

1. A method for fabricating a functional dental element, wherein a three-dimensional printing technique is used.
2. A method according to claim 1, wherein the shape and dimensions of the dental element are measured in a patient while using an optical scan technique, preferably a laser technique.
3. A method according to claim 2, wherein the laser technique yields data about shape and dimensions in electronic form.
4. A method according to any one of the preceding claims, wherein layers of a suitable material are successively applied onto each other, while measures are taken, such that each layer adheres at desired positions to a preceding layer, and excess, non-adhering material is removed.
5. A method according to claim 4, wherein the suitable material is a powder and wherein the bonding between the layers is realized by means of a binder.
- 15 6. A method according to claim 5, wherein a computer is used for controlling, on the basis of the data obtained upon measuring, a print head which applies the binder to specific, desired positions.
7. A method according to claim 5 or 6, wherein the binder is selected from the group of colloidal silica, polyvinyl acetate (PVA), starch adhesives, acrylates, polyvinyl alcohol, polyethylene oxide (PEO), ethylenevinyl acetate (EVA) and derivatives thereof.
- 20 25 8. A method according to claims 5-7, wherein the powder is selected from the group of ceramic materials, such as SiO₂, Al₂O₃, K₂O, Na₂O, CaO, Ba₂O, CrO₂, TiO₂, BaO, CeO₂, La₂O₃, MgO, ZnO, Li₂O and combinations thereof, and metals, such as alloys of gold, platinum, palladium, nickel, chromium, iron, aluminum, molybdenum, beryllium, copper, magnesium, cobalt and tin, and combinations of metals and ceramic materials.

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9. A method according to any one of claims 5-8, wherein the layers are applied with a doctor blade.
10. A method according to claims 5-9, wherein the powder is applied in dispersed form.
- 5 11. A method according to claim 10, wherein in a layer, powders of a different nature are used.
12. A method according to claim 11, wherein in a layer, powders of a different color are used.
13. A method according to claims 10-12, wherein at least one layer
10 differs in composition from the others.
14. A method according to claims 11-13, wherein the powder is locally applied with a computer-controlled nozzle.
15. A method according to claims 5-14, wherein the dental element is sintered at a temperature of 400-800 °C for a period between 10 minutes
15 and 3 hours.
16. A method according to claim 15, wherein after sintering an infiltration with glass-ceramic or a polymer is carried out.
17. A method according to any one of the preceding claims, wherein the dental element is additionally shaped by grinding, filing, polishing,
20 sanding, blasting or treatment with a ball bed.
18. A dental element obtainable by a method according to any one of the preceding claims.